

Applicant: Mihara KIYOO
Docket No. (05:153)
Preliminary Amdt.

AMENDMENTS TO THE SPECIFICATION:

Page 1, please add the following new paragraphs before paragraph [0001]:

- [0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS
- [0000.4] This application is a 35 USC 371 application of PCT/JP 2004/010376 filed on July 14, 2004.

Please replace paragraph [0003] with the following amended paragraph:

- [0003] This invention relates to an improved bag evacuation valve, and more particularly to such a valve mechanism which can be used regardless of the with evacuation devices having suction nozzles of widely differing diameter of the nozzle of a suction device; and which does not damage any other, for example, tightly closed bag stacked on its outside or placed adjacent to it, while allowing bags stacked on or adjacent to one another to form a flat and stable shape of packing.

Please replace paragraph [0006] with the following amended paragraph:

- [0006] A tightly closed bag as mentioned above is sometimes equipped with a valve mechanism for keeping its inside and outside from each other so that when air has been forced out from its inside by suction, a negative pressure prevailing in its inside may not allow air to flow in from its outside (see, for example, Patent Literature 1 and Patent Literature 2) as known, for example from Japanese Patent JP-A-6-227551 and JP-UM-A-4-132043. Patent Literature 1 - JP-A-6-227551 (Claim 1 and Fig. 4), Patent Literature 2 - JP-UM-A-4-132043 (Claim 1 and Figs. 2 and 3).

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Page 2, please replace paragraph [0007] with the following amended paragraph:

[0007] According to ~~Patent Literature 1 and 2~~ the above documents, however, a tightly closed bag has a connector projecting from its valve mechanism mounting side for connecting the nozzle of a suction device, and it produces inconveniences as pointed out below. More specifically, the known valve mechanism has a problem in that the diameter (or shape) of the suction device nozzle does not suit the shape of the connector projecting from the valve mechanism mounting side.

Please replace paragraph [0008] with the following amended paragraph:

[0008] Moreover, it is likely to result from the projection of the connector from the valve mechanism mounting side of a tightly closed bag that when tightly closed bags holding their contents are stacked on one another, the load of an upper bag may be concentrated on the projecting portion of a lower bag and [[its]] the resulting stress may damage the contents of the upper bag. Furthermore, it has been likely that stacked bags may not form a flat shape of packing, but may make an inclined shape formed by the gradual elevation of their valve mechanism mounting portions, making it impossible to stack many tightly closed bags holding their contents on one another.

Page 3, please replace paragraph [0011] with the following amended paragraph:

[0011] It is an object of this invention to solve the problems as pointed out above and provide a valve mechanism which can be used regardless of the diameter of the nozzle of a suction device, and does not damage any other, for example, tightly closed bag stacked on its

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outside or placed adjacent to it, while allowing bags stacked on or adjacent to one another to form a substantially flat and stable shape [[of]] for packing.

Please add the following new paragraph after paragraph [0013]:

[0013.5] The foregoing and other features and advantages of the valve mechanism of this invention will become apparent from the detailed description contained herein below, taken in conjunction with the drawings, in which:

Page 5, please replace paragraph [0024] with the following amended paragraph:

[0024] The suction connector mounted on the outer side of a tightly closed bag having a hole formed therein is so shaped as not to have any portion projecting from the outer side of the tightly closed bag and has a vent formed in its center. The ~~shape of the suction connector term “so shaped as not to have any projecting portion”~~ so shaped as not to have any projecting portion means, for example, a flat shape, or a shape which is arcuate in cross section to the extent not exceeding the thickness of its edge portion.

Please replace paragraph [0025] with the following amended paragraph:

[0025] The shape of the suction connector ~~so shaped as not to have any projecting means~~ may also be a shape which is arcuate in cross section to the extent, for example, not exceeding the height of the recessed shape in cross section of the valve base when fitted therein as will be described later.

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Page 6, please replace paragraph [0028] with the following amended paragraph:

[0028] The valve body attached on the inner side of a tightly closed bag has a recessed cross section, and preferably an arcuate cross section, so that when air is discharged from the tightly closed bag holding its contents, the valve body may not [[flaw]] damage its contents or leave any flaw thereon, even if it may be brought into close contact with them. Thus, the valve mechanism according to this invention can restrain its suction connector from projecting on the outer side of a tightly closed bag, as the valve body is situated in the valve base having a recessed cross section.

Page 7, please replace paragraph [0031] with the following amended paragraph:

[0031] The valve mechanism according to this invention also has load restraining means provided around the vent of the suction connector for restraining the load of the suction device used for discharging air from the tightly closed bag. The load restraining means may, for example, be formed by stepped portions keeping the nozzle of the suction device and the suction connector from making close contact with each other, or by holes extending through the suction connector. This ensures that even after ~~discharging~~ evacuating air from the tightly closed bag, the suction device should properly draw air from outside the tightly closed bag and thereby have its load restrained.

Please replace paragraph [0033] with the following amended paragraph:

[0033] The valve mechanism 1 has a circular suction connector 2 attached to the outer side of the hole of the tightly closed bag, as will be described below. The suction connector 2 is

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substantially circular in order not to damage the tightly closed bag. The suction connector 2 has an arcuate cross section protruding outwardly from the outer side of the tightly closed bag to the extent not exceeding the thickness of the edge portion of the suction connector 2 according to the embodiment under description, and has a hole formed in its center as viewed in top plan, and defining a vent 2a. The suction connector 2 has a concavity 2b formed in its position facing the edge portion of a valve base 3 as will hereinafter be described.

Page 8, please replace paragraph [0036] with the following amended paragraph:

[0036] The valve mechanism 1 has a circular valve base 3 mounted on the inner side of the hole of the tightly closed bag as will hereinafter be described. The valve base 3 has a recessed cross section, or a generally trapezoidal cross section according to the embodiment under description, which defines a flow space 3a in its inside and has a suction opening 3b formed in its center as viewed in top plan. Moreover, the valve base 3 has a ring member 3c of an elastic material, such as a resin, attached to its edge portion integrally therewith. The ring member 3c fits in the concavity 2b of the suction connector 2 by elastic deformation, while holding the edge portion of the hole of the tightly closed bag therebetween.

Page 9, please replace paragraph [0038] with the following amended paragraph:

[0038] The ridges 3d are curved ~~in corner~~ at their ends and edges so as not to damage the contents when contacting them. The suction connector 2 and the valve base 3 are joined together by the ring member 3c fitted in the concavity 2b with the edge portion of the bag adjacent the periphery of the hole on the inner side of the tightly closed bag held

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therebetween, as stated above, whereby the valve mechanism 1 is attached to the tightly closed bag.

Page 10, please replace paragraph [0040] with the following amended paragraph:

[0040] The valve mechanism 1 having the construction described above first has its suction connector 2 positioned outside a tightly closed bag and its valve base 3 positioned inside it, so that the concavity 2b of the suction connector 2 and the ring member 3c of the valve base 3 may face each other along the edge portion of the hole in the tightly closed bag, and the ring member 3c is fitted in the concavity 2b with the edge portion of the hole of the bag held therebetween. The edge portion of the bag adjacent the hole of the tightly closed bag held between the concavity 2b and the ring member 3c is not damaged as the ring member 3c is of an elastic material, and the suction connector 2 and the valve base 3 are joined firmly and held against movement.

Please replace paragraph [0043] with the following amended paragraph:

[0043] Air is ~~discharged~~ evacuated from the tightly closed bag through the suction opening 3b, flow space 3a and vent 2a. Although a gradual reduction in volume of the tightly closed bag may cause its contents to approach the suction opening 3b closely, the ridges 3d keep the suction opening 3b from being blocked by its contents.

Page 11, please replace paragraph [0044] with the following amended paragraph:

[0044] Although the discontinuation of the suction may result in the close contact of the valve base 3 with the contents of the bag, and although the load of an upper bag in a stack

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may cause the close contact of the valve base 3 in a lower bag with its contents, the ridges 3d rounded ~~in corner~~ edges according to the embodiment under description do not damage the contents of the bag.

Page 13, please replace paragraph [0054] with the following amended paragraph:

[0054] As described above, the valve mechanism according to this invention has a suction connector mounted on the outer side of a tightly closed bag having a hole formed therein, the suction connector having a vent formed in its center and being so shaped as not to form any projection on the outer side of the tightly closed bag, and a valve base mounted on the inner side of the tightly closed bag and having a recessed shape in cross section, the valve mechanism according to this invention can be used with any nozzle regardless of its diameter, and a tightly closed bag in which the valve mechanism according to this invention is adopted can be stacked on, or placed adjacent to any other, for example, tightly closed bag without interfering with it, and therefore without damaging it, while bags stacked on or adjacent to one another can form a flat and stable shape of packing. **It is to be understood that reference herein to “any nozzle regardless of its diameter” is intended to refer to the suction nozzle of suction devices such as vacuum cleaners or the like normally employed to evacuate such bags.**

Page 14, please replace paragraph [0055] with the following amended paragraph:

[0055] The valve mechanism according to this invention also has a ring member made of an elastic material and attached integrally to the valve base and the suction connector has a

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concavity formed in its portion corresponding in position to the ring member attached to the valve base, so that when the valve mechanism is mounted in the hole formed in a tightly closed bag, the bag maybe held between the ring member and the concavity and thereby prevent [[any]] air from flowing in through between the suction connector and the valve base put together. The bag held between the ring member and the concavity is protected from breaking, as the ring member is of an elastic material.

Please replace paragraph [0056] with the following amended paragraph:

[0056] The valve mechanism according to this invention also has ridges formed on the opposite side of the valve base from the suction connector and extending from the periphery of a suction opening, so that even when air is ~~discharged~~ evacuated from the tightly closed bag, the suction opening may not be closed by the contents of the bag, but may enable air to be ~~discharged~~ evacuated satisfactorily.

Please add the following new paragraph after paragraph [0057]:

[0058] The foregoing relates to a preferred exemplary embodiment of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.